

Table 1: Worker sealed brood area (In.²/colony) for F1 Carniolan and F1 Italian hybrids colonies as affected by insulation cover during fall season of 2018/2019.

Measuring date	F1 Carniolan							F1 Italian						
	Foam insulation	Nest Temp.	Canvas insulation	Nest Temp.	Without insulation	Nest Temp.	LSD _{0.05}	Foam insulation	Nest Temp.	Canvas insulation	Nest Temp.	Without insulation	Nest Temp.	LSD _{0.05}
01/11/2018	153.6	34	133.0	33	117.6	32	16.2	177.8	34	159.6	33	136.2	32	22.4
13/11/2018	143.0	34	129.6	33	102.4	30	22.1	165.4	34	145.0	33	126.6	32	19.1
25/11/2018	136.8	33	125.4	32	91.8	30	14.3	153.2	33	131.6	32	116.6	31	19.6
07/12/2018	127.6	34	114.2	32	84.0	30	20.8	143.6	32	120.2	31	105.0	31	18.7
19/12/2018	123.6	32	104.6	31	80.8	30	18.5	133.2	33	111.2	30	91.2	30	23.7
31/12/2018	111.6	32	93.8	30	78.4	29	13.1	115.8	31	94.0	31	83.2	29	16.3
12/01/2019	100.4	31	100.2	31	85.0	30	8.5	128.2	32	106.0	31	96.8	30	17.5
24/01/2019	91.0	31	89.2	30	77.4	29	12.3	112.8	31	97.0	32	85.6	29	11.3
05/02/2019	105.4	32	95.0	31	83.2	30	14	106.8	32	86.0	30	80.0	29	16.7
17/02/2019	116.4	32	106.6	32	92.8	31	18.2	95.6	31	82.8	30	71.2	29	13.1
01/03/2019	125.4	32	120.4	32	105.4	31	16.8	109.0	31	96.6	30	81.8	29	11.4
Total	1334.8		1212.0		998.8			1441.4		1230.0		1074.2		
Mean	121.3		110.2		90.8			131.0		111.8		97.7		
r Value*	0.881086		0.933776		0.857338			0.903256		0.819856		0.967723		

r Value* = correlation coefficient values between brood nest temperature and sealed brood area.